



Missouri Equine Survey 2001

*A comprehensive review of Missouri's equine industry
and its impact on the state's economy*



DEPARTMENT *of* AGRICULTURE
STATE OF MISSOURI
JEFFERSON CITY

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GOVERNOR

LOWELL MOHLER
DIRECTOR

*Serving, promoting and protecting the agricultural producers, processors
and consumers of Missouri's food, fuel and fiber products.*

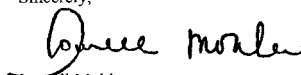
Dear Friends of Missouri Agriculture:

When you think about states known for their equine industries, you're likely to think of Kentucky or Tennessee. However, this equine survey - the first conducted in Missouri - reveals that the Show Me State is a national contender. In fact, the figures show Missouri may rank as high as third in the nation in equine inventory with 200,000 head.

This survey underscores what equine enthusiasts have always known: Missouri's equine industry is a significant contributor to the state's economy. Whether for racing, riding or working, equine are an important part of Missouri's landscape and agricultural heritage.

We thank those equine owners who took the time and effort to participate in this survey so we could estimate the industry's economic impact. The following figures testify to a healthy, growing equine industry in our state.

Sincerely,


Lowell Mohler
Director of Agriculture

Cover photo courtesy of Bob McEowen,
field editor with *Rural Missouri*.

2001 MISSOURI EQUINE SURVEY



Issued Cooperatively by

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2001 Missouri Equine Survey

Survey Objective – The objective of the 2001 Missouri Equine Survey was twofold. The first goal was to accurately determine the inventory of equine in the state, both on and off farms. Second, the survey was to determine the equine industry's impact on the Missouri economy.

Survey Design – The Missouri Equine Survey was designed to collect data from equine owners and boarders using list and area frame probability sample survey methodology with a complete follow-up of non-respondents. After extensive list-building efforts, a sample of equine owners and boarders was drawn from the Missouri Agricultural Statistics Service's list sampling frame. A stratified random sample of 2,301 names was drawn from a list of 20,578 names based upon control data for number of equine.

Additional names and addresses were provided by various breed associations and riding clubs. These were added to names found from searches of equine publications, phone books, and the Internet, then checked against the list-sampling frame for duplication. From this second collection of names, a simple random sample of 801 names was drawn from a list of 4,774 names, as no control data were available for stratification.

This resulted in a final universe size of 25,352 from which a sample of 3,102 was drawn. In order to compensate for incompleteness of coverage by the list frame, an area frame sample was selected from respondents to the June Agricultural Survey who reported equine on land they operated. After removing names duplicated with the list frame, a total of 131 non-overlap respondents were contacted.

Survey Questionnaire - The questionnaire, appendix 1, was developed by the Missouri Agricultural Statistics Service with assistance from the Missouri Department of Agriculture and equine industry representatives. The survey was designed to collect information on equine inventory and value as of January 1, 2002. Data for acres operated, assets, expenditures, sales, and employment were collected for the entire year of 2001.

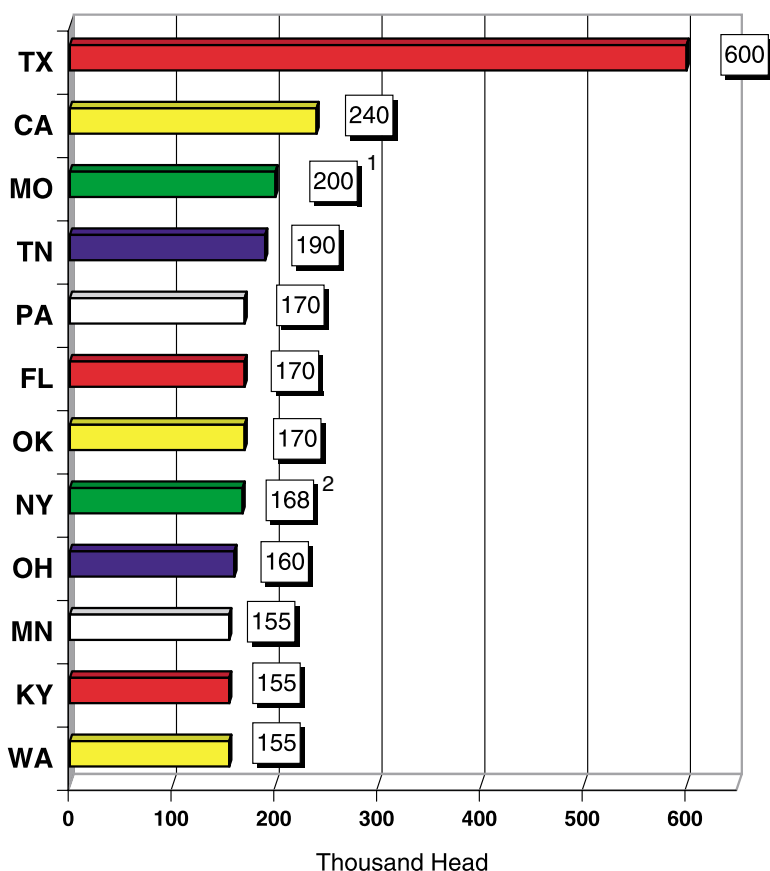
Data Collection - Survey questionnaires were mailed to a stratified sample and random sample of list frame respondents in March and May 2002, respectively, while area frame respondents were mailed questionnaires in July. Second request mailings were sent to list frame non-respondents, and follow-up phone calls were made to all remaining non-respondents in an effort to maximize response rates.

Survey Results - Both the list and area frame components of the survey had acceptable response rates of 46 percent. Of the 3,102 questionnaires mailed to the list frame respondents, a total of 1,103 positive responses were obtained. There were a total of 214 non-respondents, 193 refusals, and 332 people who reported that they had no equine. Of the 131 area frame questionnaires, there were 60 usable responses, 57 non-respondents, and 14 refusals. Survey inventory results have a statistically calculated margin of error of plus or minus three percent.

Survey Says, “Missouri Ranks #3!”

Results of the statistically sampled survey of Missouri equine enthusiasts indicate that Missouri equine inventories may be the third largest in the nation. At 200,000 head, only Texas and California have recorded larger numbers at 600,000 and 240,000 head, respectively. Current data on the equine industry remains sketchy as the comparative inventory numbers came from a 1999 survey published by USDA – NASS. Independent analyses of the equine industries do exist, although the USDA data were collected across all states using the same methodology during the same time period. For that reason, comparison is made using the USDA data.

Equine by State



Source: USDA –NASS Equine Survey, 1999

1/ Missouri Equine Survey, 2001

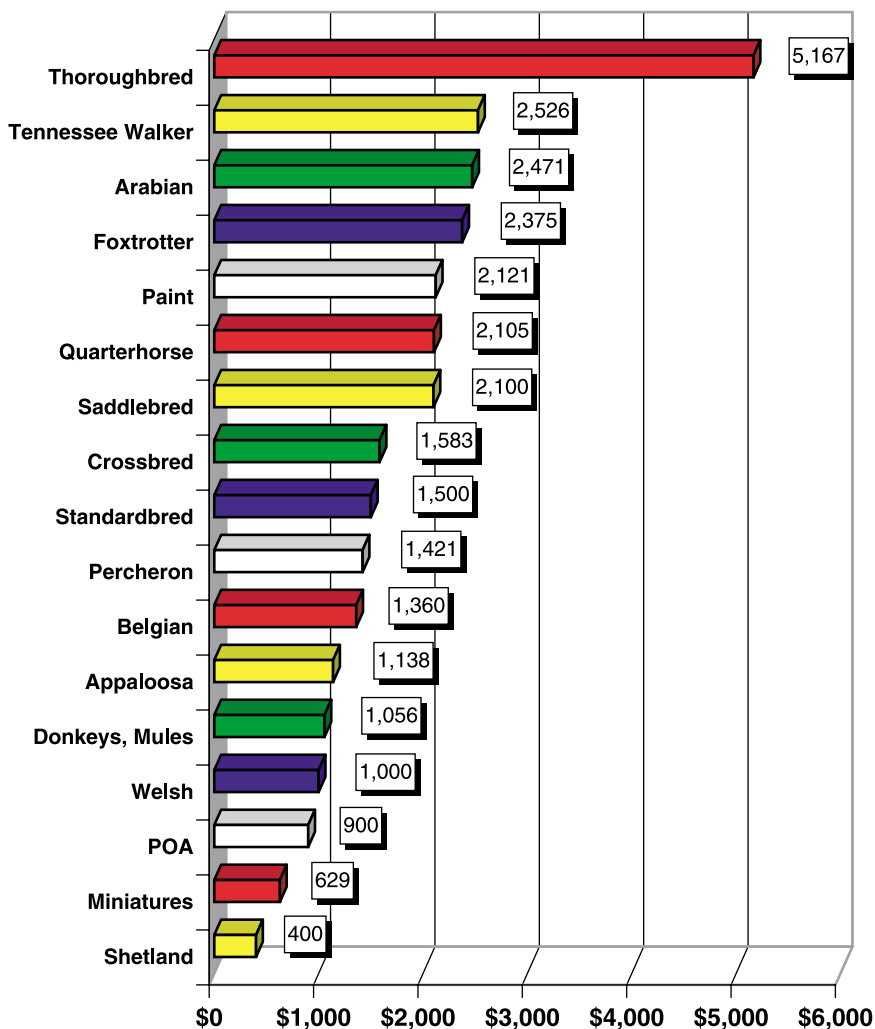
2/ New York Equine Survey, 2000

Equine Inventory Estimated at 200,000 Head

On January 2, 2002, Missouri had a total of 200,000 equine at 37,000 locations. Light horse breeds, at 173,000 head, accounted for 86.5 percent of the total equine. Quarter horses were the predominate breed accounting for 76,000 head or 43.9 percent of all light horse breeds. Paints and Foxtrotters were the next most common breeds accounting for 33,000 and 16,000 head, respectively. Race horses comprised two percent of the total or 4,000 head, with Thoroughbreds outnumbering Standardbreds three to one in the race horse breeds. Draft horses numbered 6,000 head or three percent of all equine. Belgian and Percheron draft horses were the dominant breeds. Ponies, at 8,000 head, comprised four percent of total equine. Miniatures made up 43.8 percent of the total ponies. Donkeys, mules and burros accounted for 9,000 head or 4.5 percent of the equine in Missouri.

Breed	Number	Value (000)
Quarter Horse	76,000	\$160,000
Paint	33,000	\$70,000
Foxtrotter	16,000	\$38,000
Tennessee Walker	9,500	\$24,000
Arabian	8,500	\$21,000
Appaloosa	6,500	\$7,400
Crossbred	6,000	\$9,500
Saddlebred	5,000	\$10,500
Other Light Horse Breeds	12,500	\$39,600
Total Light Horse Breeds	173,000	\$380,000
Race Horse Breeds	4,000	\$17,000
Belgian	2,500	\$3,400
Percheron	1,900	\$2,700
Other Draft Horse Breeds	1,600	\$1,900
Total Draft Horse Breeds	6,000	\$8,000
Miniatures	3,500	\$2,200
Other Pony Breeds	4,500	\$3,300
Total Pony Breeds	8,000	\$5,500
Donkeys, Mules and Burros	9,000	\$9,500
Total All Breeds	200,000	\$420,000

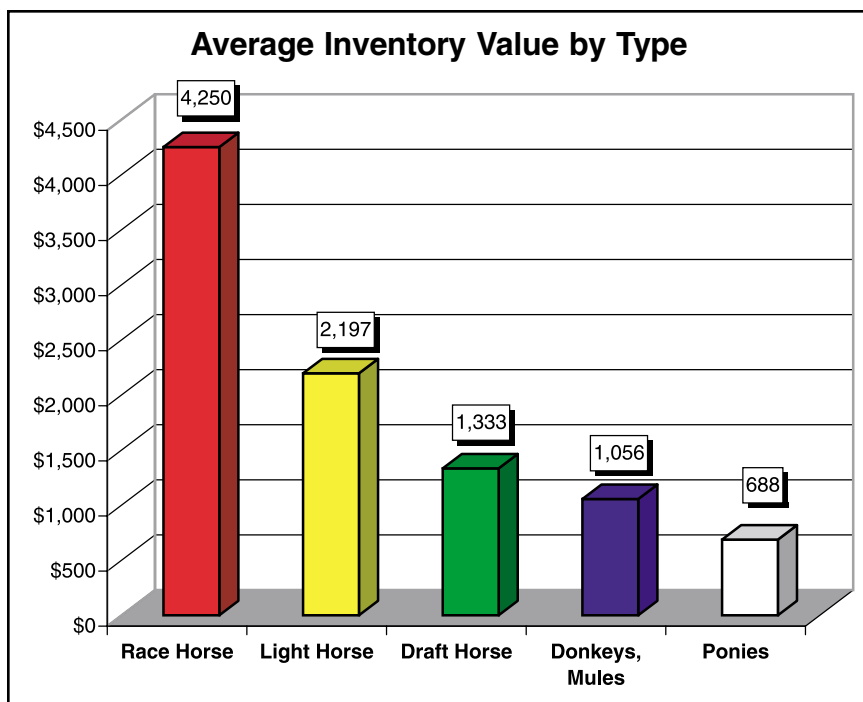
Average Inventory Value by Breed



Inventory Valued at \$420 Million

The estimated value of all equine located in Missouri on January 1, 2002 was second only to the cattle and calf industry. At \$420 million, the equine value compares to \$2.9 billion for cattle and calves, but is well ahead of hogs and pigs valued at \$204 million as of December 1, 2001.

Light horse breeds led the overall value at \$380 million, averaging \$2,197 per head, and represent more than 90 percent of the total equine value. Race horse breeds collectively showed an average value of \$4,250, with Thoroughbreds leading the way. Warmbloods and Clydesdales, although relatively small in number, led the breed values at \$15,000 per head or above.



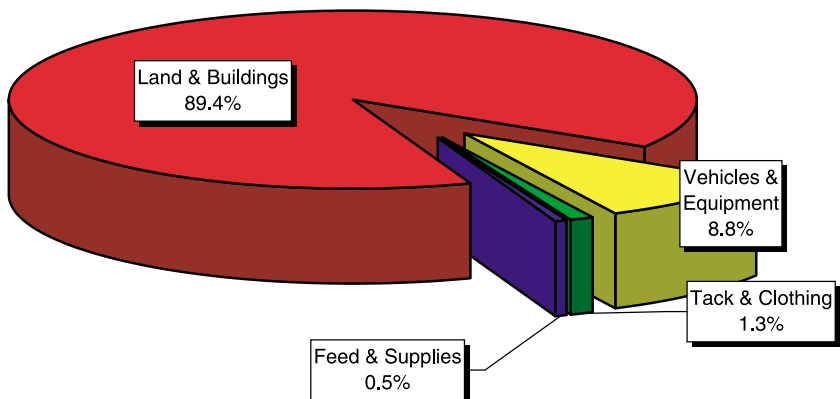


The Foxtrotter, a light horse breed, became the official state horse in June 2002.

Equine Assets Total \$8.5 Billion

Land, fencing and buildings, by far the largest asset, accounted for nearly 90 percent of the \$8.5 billion worth of assets reported on places with equine in Missouri on January 1, 2002. The value of vehicles and equipment was the next largest asset category at \$750 million or nearly nine percent of all assets. Tack and clothing added \$110 million, while feed and supplies on hand provided the remaining \$40 million.

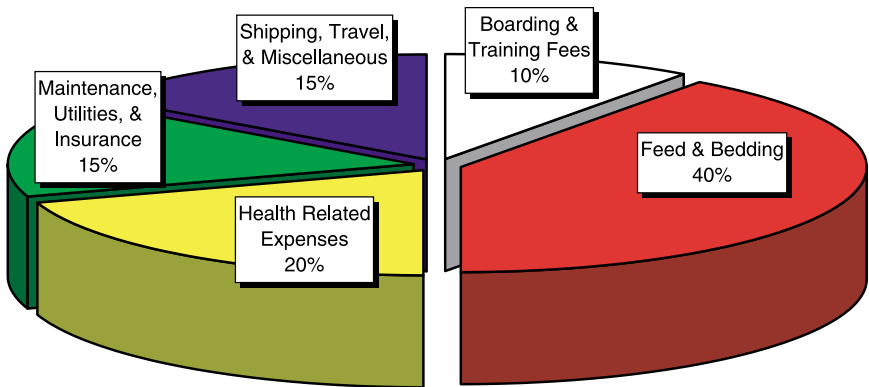
Equine Assets



Operating Expenses Total \$200 Million

Feed and bedding outpaced other operating expenses during 2001. At \$80 million, feed and bedding represented 40 percent of the total expenditures followed by health-related costs at 20 percent or \$40 million. Shipping, travel and other miscellaneous expenses totaled \$30 million, with the same expenditure associated with utilities, insurance, and maintenance expenses. Boarding and training accounted for 10 percent of the expenditure pie.

Operating Expenses



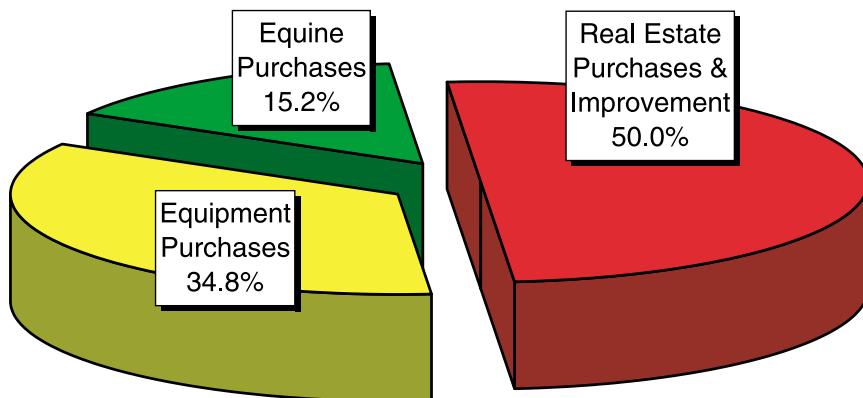
Labor Costs \$30 Million

The Missouri equine industry supplies employment to 10,500 workers, 1,700 of which were identified as full-time employees. Part-time workers (employed less than 150 days during the year) accounted for 83 percent of all workers. The total compensation for all labor was \$30 million during the 2001 calendar year. Labor costs included such non-cash items as the employers share of social security tax, insurance, pensions, housing, meals, clothing and other benefits in addition to salaries and wages.

Capital Expenditures Recorded at \$230 Million

Purchases and improvements to real estate accounted for half of the total capital expenditures by Missouri equine owners and totaled \$115 million during 2001. The purchase of equipment accounted for an additional \$80 million, while \$35 million was spent on the purchase of equine.

Capital Expenditures



Sales Top \$45 Million

Sales of equine exceeded purchases during 2001 by \$10 million. Survey results indicated 5,000 equine owners sold animals at the average rate of four sales per owner. The sale of 20,000 equine resulted in recorded revenues of \$45 million, an average of \$2,250 per animal sold. The difference between sales and purchases may indicate that Missouri is a net exporter of equine, a positive for the overall agricultural industry.



*A young colt gallops
in a Missouri pasture.*

Appendix 1



MISSOURI
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2001 EQUINE SURVEY

Form Approved
O.M.B. Number 0535-0227
Approval Expires 08/31/02
Project Code 454
QID-03005029

Dear Equine Enthusiast:

The economic impact of the equine industry has long been known as significant, but how much contribution to the state of Missouri is unknown. Economic data will help the industry in promoting the importance of equine to the State's economy. We are undertaking this study to help everyone understand the importance of the equine industry in the Missouri economy. This survey will provide some facts about the number and value of equine, assets, and related expenses.

Please make corrections in name, address and zip code, if necessary.

Whether you have one animal or a stable full, your contribution is essential. Results of this survey will be provided to anyone interested in Missouri's equine industry. Ag leaders, educators, and policy makers are depending on this study to measure the economic contribution of Missouri equine.

This study is endorsed by the Missouri Department of Agriculture, various breed associations, and allied industries within Missouri. Your cooperation is entirely voluntary but your response is extremely important. Your data represent not only your own but also similar operations throughout the state. The information you provide is kept **STRICTLY CONFIDENTIAL** and used only for compiling state level estimates. Federal law prohibits disclosing individual data. Thank you in advance for your assistance.

Gene Danekas
State Statistician

Instructions for completing the study!

- * Report for all equine, regardless of ownership, on the land you operated January 1, 2002.
- * Record all equine related expenditures and related assets in whole dollars.

SECTION I - Equine Operation

Acres

1. What was the total acreage in this equine operation on January 1, 2002?
(If zero, skip to question 3)

903

2. Of the acres (item 1) you operated, how many acres were used for equine related purposes?
(skip to Section II)

104

3. Did you own equine or have equine related expenses during 2001?

☐

Yes (continue)

☐

No (skip to Section VI)

4. Where were your equine kept or boarded? (If other than your operation.)

(skip to Section III)

SECTION II - Equine Inventory and Values on January 1, 2002

(Please report all equine, regardless of ownership, on your operation.)

Breeds	Total Number on Hand	Total Estimated Value (Dollars)	Breeds	Total Number on Hand	Total Estimated Value (Dollars)
A. Light Horse Breeds			C. Draft Horse Breeds		
Appaloosa	910	810	Belgian	925	825
Arabian	911	811	Clydesdale	927	827
Crossbred	918	818	Percheon	926	826
Morgan	913	813	Other	928	828
Paint	912	812	D. Ponies		
Missouri Foxtrotter ..	914	814	Connemara	920	820
Quarter Horse	908	808	Minatures	931	831
Saddlebred	909	809	Pony of the Americas	932	832
Tennessee Walker ..	907	807	Shetland	933	833
Warmbloods	917	817	Welsh	934	834
Other gaited breeds ..	919	819	Other	935	835
B. Race Horse Breeds			E. Donkeys, Mules, & Burros	936	836
Standardbred	920	820	F. Other (specify)	937	837
Thoroughbred	921	821	G. Total (Sum A+B+C+D+E+F)	955	855

SECTION III - Assets on January 1, 2002

Dollars

1. What is your estimate of the **CURRENT VALUE** of all equine related land, fencing, and buildings on your operation on January 1, 2002?
601
2. What is your estimate of the **CURRENT VALUE** of all vehicles and equipment owned by you and associated with your equine?
(Include tools, tractors, farm trucks, manure spreaders, starting gates, hot walkers, treadmills, horse trailers, vans, etc.)
602
3. What is your estimate of the **CURRENT VALUE** of all equine feed and supplies on hand that you own?
(Include grain, hay, straw, other bedding, seeds, fertilizers, feed additives, vitamins, minerals, veterinary supplies, etc.)
604
4. What is your estimate of the **CURRENT VALUE** of all tack, equipment, and equestrian clothing that you own?
(Include saddles, bridles, halters, harnesses, riding/driving/racing equipment, grooming equipment, blankets, trunks, etc.)
605

SECTION IV - Equine Related Expenditures

Dollars

A. Operating Expenditures for The Entire Year of 2001

1. Boarding and training fees paid to others
608
2. Feed and bedding
(Include value of hay, grain and bedding (purchased and grown), mixed feeds, supplements, etc.)
646
3. Health related expenses
(Veterinarian fees, medicines, parasite controls, farrier expenses, stud fees, breeding, semen expenses, equine, insurance, etc.)
611
4. Maintenance, utilities, insurance
(Include repair of buildings and fences, equine related utilities, fuels, taxes, interest, and rent)
615
5. Shipping, travel and other miscellaneous expenditures
(Include registration fees, competition and entry fees, airfare, lodging, advertisements, entertainment, equestrian clothing, tack, and other miscellaneous expenses not previously listed)
620

Dollars

B. Capital Expenses Incurred for The Entire Year of 2001

1. Purchases of equine
(If partial ownership, include only your share)
623
2. Real estate purchases and improvement
(Include materials for construction of or additions to equine related buildings, fences, etc.)
624
3. Equipment purchases
(Include tractors, manure spreaders, motor homes, campers, pickups, autos, horse vans, trailers, portable stalls, starting gates, hot walkers, treadmills, sulkies, carts, buggies, etc.)
625

SECTION V - Equine Sales and Employment

1. Total Equine owned by this operation that were sold during 2001

750

Dollars

2. What was the gross receipts from equine sold during 2001?

(If partial ownership, include only your share)

751

Paid Workers

3. Total number of paid workers hired by this equine operation.....

Full Time 150 Days or More (Number)	Part Time Less than 150 Days (Number)
626	627

Dollars

4. Total Cash and non-cash labor expenses for 2001

(Include wages, employer social security tax, insurance, pensions, housing, meals, clothing, and other benefits.)

636

SECTION VI - Survey Results

Would you like to receive a free copy of the results of the Equine Survey in November 2002?

The survey results will also be available on the Internet at agebb.missouri.edu/mass.

☐ NO

☐ YES - Enter a 1 in the box

638

That completes the survey. Thank you for your help.

Comments:

Respondent _____ Phone () _____

Title _____ Date _____

E-Mail Address _____



Photo courtesy of Mules and More magazine, Bland, Missouri

The Missouri mule was chosen as the state's official animal by the 88th General Assembly in 1995. Known for its strength, hardiness, intelligence, even temper and healthy stubbornness, the mule has come to symbolize Missouri.

2001 Missouri Equine Survey compiled by:

Missouri Agricultural Statistics Service

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